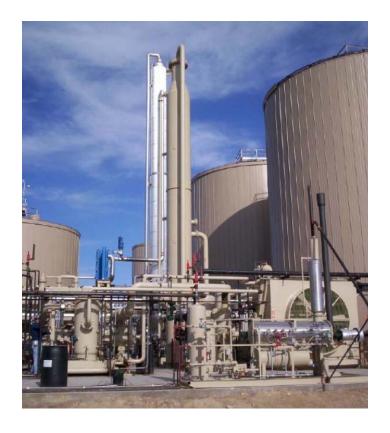


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Weld County Renewable Natural Gas Project Update



Date: October 26, 2011

PROJECT LOCATION: PIERCE, COLORADO, WELD COUNTY

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1. Executive Summary

Homeland Biogas Energy ("HBe") plans to develop, own, and operate an anaerobic facility ("Weld County") to digest manure and other organic, food-processing residuals ("substrate"), to be located at the Longs Peak Dairy (the "Dairy") located 3 miles east of Pierce CO. The purpose of Weld County is to digest the manure and substrate to produce biofuel. HBe will then collect and condition the produced biofuel to pipeline grade using Pressure Swing Adsorption (PSA) technology, and then sell as a Renewable Biomethane.

Weld County will be a 3,320 MMBtu per day facility projected to produce 1,090,000 MMBtu per year of renewable biomethane. The project will utilize 5 standardized above-ground complete mix digester systems (~1.3 MM gallons each). The biomethane will be interconnected to Colorado Interstate Gas natural gas pipeline. The schedule to receive required construction permits is approximately 12 months. HBe received a grant from the Department of Agriculture in Q1 2011for approximately \$68,000 that will be used towards permitting related expenditures. To date no grant money has been requested for reimbursement. On October 13, 2011 a representative from HBe met with the Dairy, as well as AgProfessionals to discuss next steps in the Project permitting process. HBe is finalizing the design and drawings that will needed as part of the permitting submittals. Project permitting is expected to begin by the end of November 2011.

2. Project Review

HBe Project Team			
Project Development Manager:	Mike Casper	Permitting:	Laura Kellogg
VP of Engineering:	Peter Jackson	Financial Modeling & Support:	Tom Cocci
VP of Operations:	Ron Davies	Substrate Director:	John Illgen

Project Summary			
Project Name:	Weld County Renewable Energy Facility	Dairy Partner:	Bar 20 Dairy
Location (city, state):	Pierce, CO	RNG® Off-Take Partner:	TBD
Term (yrs.):	15 plus yrs	Saleable RNG [®] gas production (MMBtu/yr.):	1,090,000 @ 90% capacity factor
Investment (\$):	\$45 mil	Estimated Avoided GHG Emissions (tons/yr):	19,800 credits
Permitting Completion Date:	Qtr 4 2012	Manure Supply:	Longs Peak Dairy
Project Financial Closure:	Qtr 4 2012	Manure Requirement:	250,000 gallons/day
Construction Start Date:	Qtr 4 2012	Substrate Supply:	Local food processing and agriculture industry
Startup:	Qtr 4 2013	Substrate Requirement:	140,000 gallons/day
Commercial Operation Date:	Qtr 1 2014	Daily Digester Solids Produced:	250 yd³/day
Daily Water Requirement (gallons/day):	50,000 (recycle)	Daily Wastewater Discharge:	220,000 gallons/day
Design Engineering Partner:	Fagen, Inc.	Construction Partner:	Fagen, Inc

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3. Project Description

The Facility is projected to produce 3,320 MMBtu per day and 1,090,000 MMBtu per year of renewable natural gas ('RNG") and will be located on property leased from the Dairy. The Project will utilize five (5) standards HBe above ground complete mix digester system (~1.3 MM gallons each). The Facility will process collected Manure from the dairy barns and Substrate will be codigested with the Manure to maximize gas production. The biogas produced will be collected and conditioned to pipeline grade using PSA technology.

Technology

Anaerobic Digestion: The anaerobic digestion technology is a co-digestion, complete mix above ground tank system, in that the digester contents are constantly agitated. The biogas produced is made up of 60-65% methane (CH₄), 35-40% carbon dioxide (CO₂), and trace amounts of hydrogen sulfide (H₂S). It has a lower heating value (LHV) of approximately 600 Btu per cubic foot.

Biogas Scrubbing and Compression: A PSA system with compression and vacuum regeneration will be in place to remove CO₂ and remaining H₂S and H₂O from the gas, prior to compression to final delivery. This unit's removal efficiency is 99%. The technology is proven in more than 100 installations worldwide processing digester and landfill biogas to vehicle fuel and/or pipeline quality dating back more than 20 years. A thermal oxidizer with heat recovery will be employed to utilize usable methane in the PSA vent gas for digester heating purposes.

Achor Enzyme Technology; The Project will utilize Achor's enzyme technology pursuant to a License Agreement which will increase gas production from the digester system with the same Manure and Substrate inputs.

Facility Design

Manure and Substrate are fed to the digester tanks in scheduled batches. The tanks are heated via a hot water supply from the thermal oxidizer and/or boiler. The process converts the majority of the volatile solids to biogas during an average retention period of 20 days.

The raw biogas is then conditioned to pipeline grade using the PSA system as described above. As a back-up, a flare is included in the design sized to combust 100% of the biogas produced.

The effluent from the digesters will be pumped in scheduled batches to a side hill screen and screw press separator. The separated liquid will flow to settling cells and a portion will be recycled back into the digesters and the remainder will flow to the existing lagoon to await land application. Approximately 150,000 cubic yards per day of the separated solids will be utilized by the Dairy as cow bedding material and the remainder will be sold as a fertilizer.

The design of the Facility will reflect the design and operation experience of three digester facilities developed and that continue to be operated and maintained in Wisconsin and a similar size Project called Huckabay was developed (and previously operated) in Texas by the HBE team.

Dairy

The Dairy is a free stall design with open lots for dry cows and heifers. The Manure from the barn alleys will be scraped to a collection canal. Recycled effluent will be used to flush the scraped Manure from the collection canal to an existing settling basin using the Dairy's existing flush flume system. Additional Manure will be collected from the dry cow and heifer open lot pens, which will be mixed with recycled effluent and parlor flush and runoff water.

Additional Manure is available at two beef feedlots which are located within two miles of the Site.

Substrate

In addition to using animal Manure as a feedstock, the technology uses other organic residuals', referred to as "Substrate." Substrate materials are used to enhance the natural gas production above that of Manure alone. Generally, fats are the most efficient Substrate material, followed by sugars and proteins. The bacteria that digest the feedstock to produce biogas consume a variety of industrial organic materials. The anaerobic digester technology selected can process many different types of materials from many industries and sources.

The Denver metropolitan area and adjacent regions consist of a population of 2.7 million people and is home to many large food processing companies, including Cargill, JBS Swift, Tyson, Butterball, and Pilgrim's Pride, all of which generate significant quantities of material which can be used as Substrates for the Facility. Additionally, there are at least 30 significant food processing companies and 10 Ethanol plants located within 150 mile radius of the Site that generate substantial volumes of Substrate. Based on an analysis of the supply region there is sufficient volume with the necessary quality to produce the projected volume of renewable natural gas.

Digested Solids

Approximately 250 yards/day of separated digested solids will be produced at the Facility and approximately 100 will be used by the Dairy as bedding.

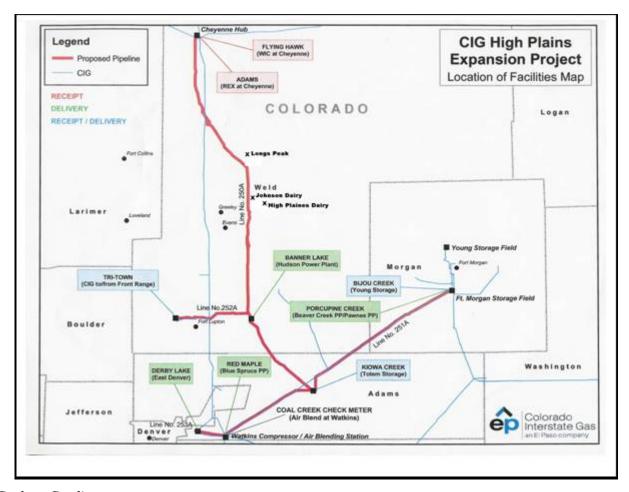
Renewable Natural Gas (RNG) Purchase Agreement

HBe has been in detailed discussions regarding the purchase of the RNG output of the Weld County Project. While we have not been able to finalize a biomathane purchase agreement to date, we continue to work closely with several entities regarding terms and pricing. In addition, HBe has offered or will be offering the RNG output from the Facility to other utilities seeking renewable energy from RNG. There are numerous renewable energy drivers in western States, including California, New Mexico and Colorado, which are creating long-term stability and demand for RNG.

Pipeline Route and Interconnect

The Project will interconnect with Colorado Interstate Gas's (CIG) natural gas pipeline network approximately 7 miles north-west of the Project site.

An engineering and construction estimate has been developed for the 7 mile pipeline. In addition, both CIG and the parent company El Paso Natural Gas Company will charge gas gathering and transmission fees which have been included in the Project's economics.



Carbon Credits

By taking the Manure and processing it in the digester, the Project will greatly reduce methane emissions from the Dairy operations. Methane is a very potent Greenhouse Gas, with a high CO2 equivalent ratio for calculating carbon credits under most protocols. Approximately 19,800 tons/year of CO2 equivalent greenhouse gas credits (GHGC) are projected for the Project from this methane reduction alone. Based on the Climate Action Reserve (CAR) Livestock Protocol. Additional GHGCs are projected based on CAR's Organic Waste Protocol. The Project will register with whichever protocol provides the highest value for credits.

Permitting

The Project will require several simultaneous permitting activities. As noted above, HBe has retained expert consultants to help guide the Project through this process. Significant permits are described below and listed in Table 1.

A Recorded Exemption (RE) which is a land title recording activity.

A Waste-to-Energy application which includes both a Design & Operations Plan (D&O) and a Closure/Financial Assurance Plan. The D&O outlines the day to day operation of the Facility, the intended process of the product, an explanation of the Facility design and any necessary emergency procedure plans. Engineer's drawings of the Facility design, grading design, and site layout will be developed and submitted. The Closure/FA Plan will detail the method and costs of Facility closure, should operations and/or business cease to exist.

A USR zoning application, which includes two public hearings, the first with the Weld County Planning Commission (WCPD) and the second with the Board of County Commissioners (BOCC). A copy of the USR application is distributed to the major state and local agencies, Weld County Public Works, Weld County Public Health and Environment, and any other government and non-government agency that may be affected by the Project.

An Air Pollution Control Division (APCD) Construction Permit, which could require public notice, extending the approval time to 135 days (approx. 90 days without public notification). An Air Pollutant Emissions Notice ("APENS") is required for each emission source) with submittal of the Construction Permit. Construction must begin within 18 months of APCD issue.

A Storm Water Construction Permit Application is required 21 days prior to construction. This application is fairly straight forward and includes the development of a Storm Water Management Plant (SWMP). The Dairy Nutrient Management Plan will likely need to be amended to reflect the changes in nutrient production and wastewater management. Depending upon the type and size of the materials stored on site, it may be necessary to develop a Spill Prevention Control and Countermeasures Plan (SPCC). This is required if a Facility's aggregate aboveground storage capacity of oil products is greater than 1,320 gallons and stored in containers with capacity equal to 55 gallons or more. The SPCC is developed after construction or with the Groundwater Discharge Permit.

A septic permit is required for the Building Permit application(s) described below, and will be submitted approximately 30 days prior to submitting any building permits.

One or more Building permits are required for building, electrical, plumbing, foundation, and temporary office 30 days prior to the start of construction. Building permits require a copy of the construction and engineering plans

Because of the size of the proposed storage tanks, a foundation report may be required for each tank pad as well as the buildings. Building permit applications also require proof of adequate water and septic systems, and a grading permit. Usually a SWMP will suffice for Weld County's grading permit requirements. The building permit application fees for Weld Country will include Road Impact Fees, Capital Expansion Fees, and Storm water Drainage Fees along with the actual permit fee.

Table 1 – Matrix of Required Project Permits

PERMIT REQUIREMENT

Air Permit (APEN) Application

Submit APCD (Air Pollution Control Division) Notice of Start Up

(Must be 30 days prior to emissions start up)

APEN Self Certification & Final Approval

(must demonstrate compliance within 180 days of start-up)

Recorded Exemption

Phase I Environmental Study

Geotechnical Study and Soil Borings

(incl. monitoring well install and prelim. subsurface reports for design)

Use by Special Review (USR) Application

Preliminary Drainage Study for USR

Pre-Application Meeting with WCPD for USR Application

Traffic Study for USR Application

Weld County Planning Commission Hearing for USR

Board of County Commissions Hearing / Approval of USR & CD

Class I Compost/Solid Waste Permit

Septic Permit

Storm Water Construction Permit

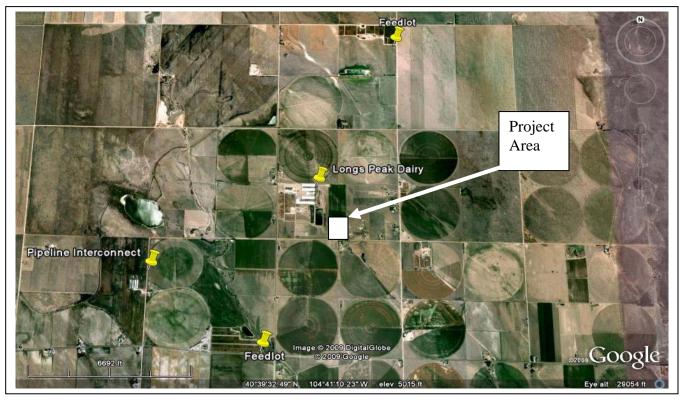
Building Permits

Ground Water Discharge Permit

4. Project Site Description

The Facility is to be installed at the existing Dairy. The entire Project area, including farmland used for land application of waste (nutrient) water and Manure from Dairy is approximately 2,400 acres. The area where the Facility is proposed to be located is approximately fifteen (15) acres in size and adjacent to the existing dairy Manure storage lagoon.

A Geotechnical Report will be prepared for the Facility. A Phase I Environmental Site Assessment will also be prepared. Currently the proposed site area is a farm field used for crop rotation.



5. Project Engineering, Procurement & Construction (EPC)

The Facility will be designed, constructed, commissioned and tested under a date certain fixed price engineering procurement and construction agreement (the "EPC Contract"). HBe will oversee all stages of the design, construction, commissioning and testing to insure that the Facility is designed and built by the EPC Contractor in accordance with HBe's Technical Specification and Scope of Work.

HBe will define functional and component acceptance tests which will be included in the EPC Contract and must be completed by the contractor prior to acceptance of the Project by HBe. Upon mechanical completion of the Project, the EPC Contractor, under the direction of HBe will conduct startup testing and commissioning to demonstrate that the Facility has been properly checked and is ready for sustained and safe operation. The purpose of these tests is to demonstrate that each of the digesters and the biogas processing systems meet the performance, reliability and emission requirements of the EPC Contract and that certain important operating features of the Facility function properly.

6. Project Operation and Maintenance (O&M)

The Facility will be operated under an Operations and Maintenance Agreement with Homeland Bioenergy Services ("HBS"), an affiliate of HBe.

The Facility will be manned a minimum of sixteen hours a day by a Facility manager and two operators. Actual labor needs will be determined based on the final design of the Manure head works and effluent separation systems. A local PC Network will also be installed to provide remote monitoring and control by HBE technical and management staff.

7. Principal Equipment Descriptions

Manure Headworks and Storage

Manure will be scraped or flushed into an existing Manure receiving pit, where it will be mixed and diluted with added fresh, recycled, or lagoon water to the desired solids content. The volume of the receiving pit will allow for up to 6 hours of storage. Cleanout of the pit will be accommodated via draining and manual cleanout with a loader. During cleanout Manure will be diverted to existing settling cells and at completion of cleanout, those stored solids will be incorporated into digester feed.

Main Tanks

Anaerobic Digester: The digester system will be comprised of five 1,290,000 gallon above ground welded steel tanks with dimensions of 67' in diameter and 50' in height. The digesters are insulated and equipped with pressure relief valves and manways. Mixing of the digesters will be achieved by top mounted vertical shaft agitators.

Substrate: Two above ground welded, epoxy coated steel Substrate tanks will be installed to contain the required Substrates received in the form of liquid or semi-liquid fats, oils, greases, or other organic Substrates to hold a minimum of 4 days of Substrate supply. The tank is insulated and vented. Mixing will be achieved by top mounted vertical shaft agitators.

Dose Tanks

Six, 5,000 gallon dose tanks will prepare mixed batches of Manure and Substrate feed for the digesters. The Manure and Substrate batch quantities will be determined by mass of each input. The combined Manure and Substrate mass will be heated to ~125F, mixed and ground within the dose tank. Four dose tanks should be able to accommodate average flow conditions, and a fifth is provided as a spare or to accommodate higher than average volume throughputs. The tanks will be heated via an external heat exchanger from a hot water supply loop heated by a thermal oxidizer and an auxiliary boiler.

Screw press separator

Side-hill screens and/or screw presses will be installed to separate large undigested solids and produce an easily compostable outlet stream. An existing collection area will be expanded and sized for approximately 2 day's solids production and will properly collect and manage any leached effluent. Existing settling cells will be expanded for the screened liquid for further solids removal prior to delivery to the existing lagoon, which will be covered.

Lagoon

Liquid from the settling cells will be pumped to the Dairy's existing lagoon prior to being applied to adjacent crop land.

H2S scrubbing

An iron solid scavenger scrubber will be installed to reduce H2S (99% removal efficiency) prior to the flare. A biological scrubber will be installed to reduce H2S after biogas has been conditioned by the gas processing equipment. An emergency bypass to the flare will be included in the event the scrubber is not able to operate properly in an emergency situation.

CO2, H2S and H2O Removal

Water will be significantly reduced through the use of compression and mechanical liquid knockouts prior to compression to 100 psig. Compressed feed gas will then be fed to a pressure swing adsorption (PSA) unit which will remove the remaining non-methane containing components. A vacuum tail gas regeneration system will be used to continuously clean the PSA beds and produce a low-grade usable fuel to be burned in a thermal oxidizer.

Biogas Fired Boiler

An auxiliary boiler will be installed to provide hot water for heat exchangers to supplement the heat recovered from the thermal oxidizer, or as needed during startup conditions. The boiler will be equipped with a weather protection shed roof.

Biogas Flare

In the event that gas is unable to be processed, it will be combusted in a flare.

Controls

Process monitoring and control of the system is managed with a programmable logic controller with an industrial PC operator interface. The system provides for real-time monitoring on a 24-hour basis with historical data collection. The control system is designed to provide automatic operation of all system components with fail-safe modes in the event of upsets.

Service building

A process service building will be constructed containing slop sink, parts storage and a maintenance and repair area. This building is of the pre-engineered steel building type.

Administration/Lab building

An administration/lab building, containing separate manager's office, break room, bathroom and lab room will be constructed. This building is of modular building type construction.

Utilities

Potable water will be provided by connection to an on-site fresh-water well and sewer connection will be to a newly constructed septic system. Electrical power will be supplied via PG&E to site transformers. The motor control center will be housed in a packaged container system. Natural gas will also be available via a connection to an on-site PG&E gas line. Phone and DSL will be supplied locally and HBe will contract for garbage disposal. Storm drainage will tie into the effluent storage pond.

Fire protection

The Fire Marshal will be contacted to discuss site access and water connection and storage requirements.

8. Process Flow Diagram with Inputs and Outputs

